



# Science

## How To Be Cold When It's Hot

When the weather is really hot, where do you go to get cool?

Many people like to head for the water. Depending on where you live, this may be the ocean, a lake, a pond, a river, a swimming pool, or just a "swimming hole." Sometimes you don't just get cool... you get COLD!

Has this ever happened to you: You go swimming on a hot day when the wind is blowing. You jump into the water, and it feels great. Then you come out of the water, the wind blows against you, and you get so cold you get goose bumps!

Here is a science experiment you can do right at home, right now, to see why this happens.



### YOU WILL NEED:

- a face cloth or any small piece of cloth that can get wet
- a small pan filled with very warm water (not hot enough to burn you)

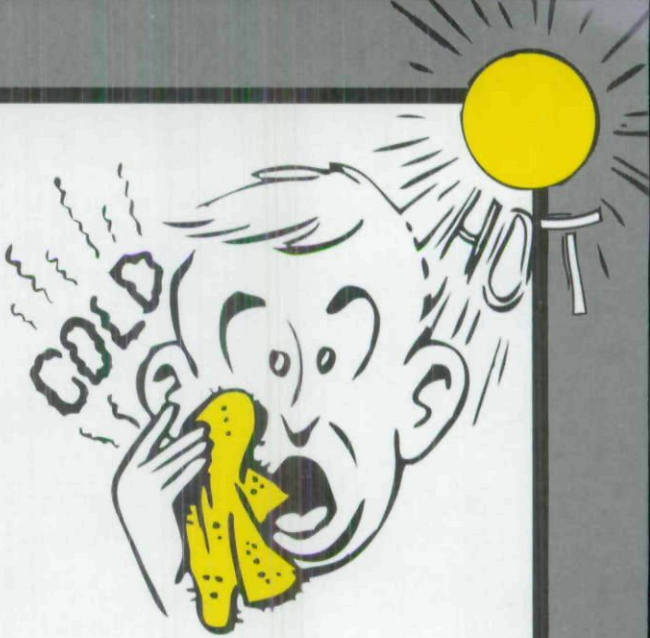
### DO THIS:

Go OUTDOORS. (Do



not do this experiment inside. It is fun outdoors but can be messy indoors.)

1. Dip the cloth into the warm water. Wring it out and touch it to your face. It will feel warm against your skin.
2. Hold the warm cloth by one corner and swing your arm around, twirling the cloth through the air. Twirl it around 10 or more times.
3. Touch the damp cloth to your face. SURPRISE! The cloth now feels chilly-COLD!



*illustrated by Alan Wassilak*

## WHAT HAPPENED?

When you twirled the cloth, some of the water EVAPORATED. This means it turned into a gas and went into the air. If you put a pan of water on the stove and turn on the heat, first the water boils. If you leave it long enough, it disappears. The water evaporates. Water must be warm to evaporate. In your experiment, the water that evaporated used the heat that was in the water when it was warm. In fact, it used up so much heat, it left the water that remained in the cloth COLD.

If you get your body wet and the wind blows on it, some of the water evaporates off your body. Where do you think it gets its heat to evaporate? From you! Your body is nice and warm so the water can use your heat to evaporate. Of course, that leaves you with less heat, so you are cold. You know what to do. Dry yourself quickly so there is no water on you to evaporate.

When you are far from a beach, remember you can always cool down by soaking your head with water. It will evaporate and leave your head nice and cool.

My father had an old hat he soaked with water and wore on hot summer days. I thought he was just being silly, but now we both know why he did this, don't we?

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